

Mitsui Chemicals, IBM Japan to Start Joint Efforts Toward Building a Blockchain-Based Resource Circulation Platform

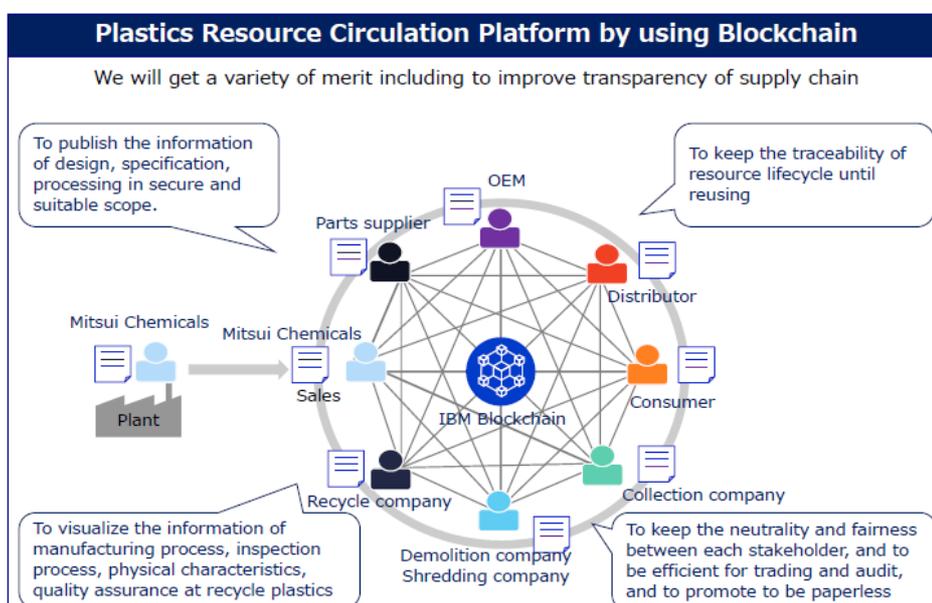
Looking to implement a traceability system for plastic materials in aim of a circular economy

Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) and IBM Japan, Ltd. (Chuo-ku, Tokyo; President: YAMAGUCHI Akio) today announced plans to start working together on a resource circulation platform that utilizes blockchain technology. The aim through this is to ensure the traceability of materials – a hurdle to clear on the way to achieving a circular economy.

While plastic demand continues to rise around the world, the problems caused by plastic waste are becoming more and more apparent – driving stronger calls than ever for society to shift to a recycling-based economy. Yet to make practical use of recycled raw materials, those involved need to be able to ensure traceability, such as by being able to specify the materials in use.

With the resource circulation platform being planned by Mitsui Chemicals and IBM Japan, the aim is to ensure traceability throughout the resource life cycle, from raw materials like monomers and polymers through to the manufacturing, sales and use of products. This aim applies also to the recycling process thereafter, in which used products are recovered, dismantled, shredded and sorted into raw materials that can be reused to manufacture new products. Additionally, the platform is intended to visualize matters such as the manufacturing processes for recycled raw materials, examination methods, physical properties and quality-related data, thereby facilitating the smooth flow of goods.

Utilizing blockchain technology for this traceability system will aid in making supply chains more transparent. It will also allow various stakeholders to guarantee the neutrality and fairness of operations, make it possible to optimize business transactions and inspections, and help those involved go paperless.



“Mitsui Chemicals sees climate change and plastic waste as important issues that need to be focused on,” said SAMBE Masao, Executive Officer in charge of Mitsui Chemicals’ Digital Transformation Division.* “If we want to solve these issues as a society, we can no longer stick to a one-way economy in which we simply consume resources and dispose of them. Instead, we’ll need to work on building a circular economy that recovers, recycles and reuses its resources.

“Here at Mitsui Chemicals, we plan to leverage the wealth of expertise and skill we’ve built up through our work with monomers and polymers, as well as the eco-friendly technologies and expertise we’re currently working on, including for recycling. By combining this all with digital transformation technologies, most notably blockchain technology, we will go about building a resource circulation platform that acts as a materials traceability system, helping in turn to bring about a circular economy.”

* Mitsui Chemicals established the Digital Transformation Division in April 2021. Going forward, this new division will work to speed up digital transformation efforts throughout the company, with a particular focus on business operations and supply chains.

For this project, IBM Japan will take the wide-ranging expertise and skill it has built up in assisting various companies in their digital transformation endeavors and utilize these to verify the setup of new blockchain-based digital platform. Capitalizing on blockchain technology will allow companies to guarantee neutrality and fairness here, as well as ensure an advanced level of security. Further, with cloud technology to offer speedy setup and flexibility, the use of AI, as well as the construction of a hybrid cloud that can link up with its existing systems will be considered. The products set to be used for all this are the IBM Blockchain Platform, as well as IBM Cloud, a public cloud service that serves as the foundation for this platform.

Upon building the resource circulation platform for plastic material traceability, Mitsui Chemicals and IBM Japan will work together toward demonstration testing.

* Blockchain technology is a form of immutable database technology that records all historical information in a continuous chain. Since all parties involved have access and there is no potential for data falsification, the technology achieves traceability by allowing all parties to follow up and see where, when and from whom various raw materials, products and more were acquired.

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